

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

25.10.2004

Applicant's or agent's file reference
Cal 86741

IMPORTANT NOTIFICATION

International application No.
PCT/EP 03/10204

International filing date (day/month/year)
11.09.2003

Priority date (day/month/year)
12.09.2002

Applicant
EASY CUT S.R.L. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)



Applicant's or agent's file reference Cal 86741	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/10204	International filing date (day/month/year) 11.09.2003	Priority date (day/month/year) 12.09.2002
International Patent Classification (IPC) or both national classification and IPC A42B3/12		
Applicant EASY CUT S.R.L. et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 4 sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 07.04.2004	Date of completion of this report 25.10.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Hannam, M Telephone No. +49 89 2399-2153 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/10204

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-10, 15 (part), 16, 17 received on 24.09.2004 with letter of 22.09.2004
11-14, 15 (part) received on 08.10.2004 with letter of 06.10.2004

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/10204

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-17
	No: Claims	
Inventive step (IS)	Yes: Claims	1-17
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Claim 1

EP-A-0 166 691 (D1) represents the closest prior art and discloses a protective helmet according to the preamble of independent claim 1. The subject matter of this claim differs from the protective helmet of D1 in that the intermediate cap comprises hooking means for fixing the internal lining.

The subject matter of claim 1 is thus new and complies with Article 33(2) PCT.

The objective technical problem being addressed by the invention is how to simplify the attachment of the lining to the helmet.

The solution presented in the characterising portion of claim 1 cannot be found in, nor is it rendered obvious by, the available prior art. The inclusion of hooking means to secure the lining has the effect that such means do not need to be incorporated into the shock-absorbing shell which, as the applicant identified in the description, is both complicated and costly.

The subject matter of claim 1 thus meets the requirements of Article 33(3) PCT.

Claim 14

Independent method claim 14 includes all essential features of a method for fixing such an inventive helmet with a lining as in claim 1. It thus equally meets the requirements of Articles 33(2) and 33(3) PCT.

Claims 2-13 and 15-17

The dependent claims include features comprising preferred embodiments of the invention according to claims 1 and 14 respectively and as such equally meet the requirements of the PCT under Articles 33(2) and 33(3).

Other comments:

- a. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.
- b. Claims 13 and 14 are worded so as not to be clearly dependent upon the foregoing claims due to the adoption of the 'cap' as the primary feature rather than a protective helmet (Article 6 PCT).

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CLAIMS

1. A protective helmet (1) of the type comprising an outer rigid cap (2) to which a shock-absorbing shell (3) made of expanded material is internally fixed, and an internal lining (5) for the comfort of the user, ^{and} ~~characterized in that it comprises~~ at least one intermediate cap (4) made of non-expanded material situated between the inside of said shock-absorbing shell (3) and said internal comfort lining (5).^x
- ~~2.~~ The protective helmet according to claim 1, characterized in that said at least one intermediate cap (4) comprises hooking means (6) for fixing said internal lining (5).
- 15 ~~3.~~ The protective helmet according to claim ¹~~2~~, characterized in that said hooking means (6) are of the temporary type, for removably fixing said internal lining (5).
- ~~4.~~ The protective helmet according to claim ²~~3~~, wherein said hooking means (6) are selected from hooking slits, Velcro® strips, pressure buttons, laces and rings, hooks.
- 20 ~~5.~~ The protective helmet according to any of the previous claims, characterized in that said at least one intermediate cap (4) is made so as to include a
- 25

thermo-formable material.

5 6. The protective helmet according to claim 5, characterized in that said intermediate cap (4) is made of a material selected from PET (polyethylene terephthalate), PETG (polyethylene terephthalate glycol), polystyrene or PC (polycarbonate).

6 7. The protective helmet according to any of the claims from 1 to 4, characterized in that said intermediate cap (4) is made of fabric.

10 8. The protective helmet according to any of the previous claims, characterized in that said intermediate cap (4) is made of acoustical material.

8 9. The protective helmet according to any of the claims from 1 to 5, characterized in that said at least one intermediate cap (4) is made of a high kinetic energy absorbing material.

10 10. The protective helmet according to any of the previous claims, characterized in that said intermediate cap (4) is shaped so as to have aeration channels and/or connection holes between said internal lining (5) and said shock-absorbing shell (3).

10 11. The protective helmet according to any of the previous claims, characterized in that the internal surface of said intermediate cap (4) is a support for a decoration.

11 12. The protective helmet according to any of the previous claims, characterized in that said intermediate cap (4) protrudes outside said external cap (2), to form appendages of said protective helmet (1).

5 13. The cap according to any of the previous claims, wherein said shock-absorbing shell (3) is made of expanded polystyrene and characterized in that said shell is co-moulded onto said intermediate cap (4).

13 14. The cap according to any of the previous claims, characterized in that said intermediate cap (4) is in the form of a film.

14 15. A method for fixing an internal lining (5) for the comfort of the wearer inside a shock-absorbing shell (3) made of expanded material of a protection helmet (1), the method comprising the following phases:

- 15
- a. producing an intermediate cap (4) made of a non-expanded material;
 - b. fixing said intermediate cap (4) to the internal surface of said shock-absorbing shell (3);
 - c. attaching said internal comfort lining (5) to the internal surface of the intermediate cap (4).

15 16. The method according to claim 15, comprising the phase of providing said internal surface of the in-

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intermediate cap (4) with temporary hooking means (6) for said internal comfort lining (5), before said phase for attaching the internal lining.

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17. The method according to any of the claims 15 or 16, wherein said intermediate cap (4) is made of a thermo-formable material, comprising a shaping phase with channels and/or holes, and/or decorating said intermediate cap before said fixing phase of said intermediate cap to the shock-absorbing shell.

10 17
18. The method according to any of the claims from 15 to 17, characterized in that said fixing phase of the intermediate cap to the shock-absorbing shell comprises a co-moulding phase of said expanded material onto said intermediate cap.

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